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Volume VII NOVEMBER 1955 Number 6

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WORKSHOP FOR MAP LIBRARIANS

Bill M. Woods

Thirteen years ago in the United States fewer than a dozen map collections included more than a few thousand maps each. Most of these collections were in the Federal Government, one was in a geographical society, two or three were in large public libraries. Only two or possibly three were on a university campus. In addition, several small collections of early maps for local areas were a part of a historical society library.

The picture during the past ten years, even in the past five years, has changed completely. Maps have been recognized as legitimate material to be collected by libraries, and in these ten years a large number of collections have been enlarged or newly organized in colleges, universities, and public libraries. A recently published directory* notes 527 collections in the United States and Canada.

This new interest in developing a map service was initiated in many instances by geographers, geologists, historians, engineers, or others returning to the campuses after four years of wartime experience making, collecting, and using maps. In other instances, public library patrons demanded that maps be made available, for during the war years they had become map users and readers in both military and civilian capacities.

In 1945 when the U. S. Army Map Service began distribution to 188 selected libraries of 30,000 maps produced by them during World War II, many a library discovered that it already had an unorganized file of several thousand Geological Survey topographic sheets, a selection of early maps, and numerous miscellaneous wall and sheet maps. Soon it was apparent that staff must be assigned to process and service this newly-born yet fully-grown collection of maps.

Staffing was often a major problem in even the large institution. A part-time student assistant, a junior staff member, or a professor particularly anxious to see a map service developed might have responsibility for the maps in a geography or geology department. A junior assistant in a reference department or a departmental librarian in geography, geology, or engineering was often assigned the responsibility for organizing the collection.

Few of the geographers or librarians had any previous experience working with maps and few had the benefit of any formal instruction in map history, map bibliography, or map care, for before 1950 little if any such specialized training was offered. Some library schools spent time teaching students how to catalog a map; some geography departments in a single cartography course discussed briefly the available types of maps. Only the most conscientious map curator could hope to find answers to his collecting and processing problems.

When Dr. J. A. Russell became Head of the Geography Department at the University of Illinois in 1949, one of the courses he recommended was one concerned with map bibliography and care. Dr. Russell felt such a course was needed to help geographers find their way around in the field of maps, to teach students how to catalog and care for maps, and to supply knowledge about maps required in many positions open to geographers. The Director of the Illinois Library School agreed to add such a course to the Library School curriculum and in the spring

*_Map Collections in the United States and Canada, a Directory._ N. Y., 1954. 170 pp. Special Libraries Association, Geography and Map Division, Map Resources Committee.

semester of 1949–1950 Maps and Cartobibliographical Aids was first offered as a two-hour undergraduate credit course or for one-half unit of graduate credit. It was described as "An examination of the problems involved in the cataloging, classification, and care of maps. The student will become acquainted with the major cartobibliographical and related aids in the field." The course was taught by the librarian of the University Map Library where since February 1944 a full-time person had been in charge.

Details of the Illinois program were described by this writer before a meeting of the Geography and Map Division of the Special Libraries Association at their 1951 convention in St. Paul. Keen interest was shown and the casual suggestion made that the course be offered as a concentrated summer program which could be attended by persons already in library positions working with maps.

The first Map Workshop was a two and a half week non-credit session held in Urbana from June 9–15, 1952. Twenty-four persons representing federal and state government agencies, universities, and public libraries attended. Seventeen states and two foreign countries (Canada and Venezuela) were represented. Previous academic training of the registrants included library science, geography, geology, history, and the social sciences.

The class had continued to be offered for regular students in the University and on July 11–22, 1955, the second Map Workshop was held in Urbana. Registration included seventeen persons, ten from universities and colleges (one a small liberal arts college), two from state agencies, two from federal agencies, two from companies, and one from a public library. Geographically, fourteen states and all parts of the country were represented, nine from west of the Mississippi, Oregon in the northwest, Arizona in the southwest, Georgia in the southeast, and New York in the northeast.

Most of the persons attending the second Workshop were employed in library positions working at least part-time with maps, although one librarian attended just to learn more about maps even though her library doesn't collect them. One student came from a library owning fifty maps, another from a library with 400,000 maps. Three or four attended to learn how to care most expeditiously for the Army Map Service maps lying unpacked and unused in their libraries. One person who attended the 1952 Workshop returned in 1955 to do additional work although the content of both programs was essentially the same.

By training, these map librarians (only one of the seventeen had the title) were geographers, geologists, musicians, psychologists, and librarians. Such a wide diversity of backgrounds, reasons for attending the Workshop, and length of experience working with maps (none as long as four years) made it necessary to assume that all knew nothing about maps. It was also assumed that all seventeen wanted to find out all they could in ten and a half days, so sessions were scheduled for six and a half hours each day with additional time available in the evenings for examination of materials, conferences, and laboratory practice. This variety and schedule was a challenge to faculty and staff of the Library, Library School, and the Geography Department assisting with the various sessions and to this writer who directed the Workshop.

Following a preliminary session Dr. A. W. Booth, Professor of Geography, conducted four sessions: 1) Map Nomenclature and Problems of Cartography, 2) Map Reading and Interpretation, 3) Aerial Photograph Reading and Interpretation, and 4) a laboratory for practice in map and aerial photograph reading. The success of these sessions intended to introduce the librarian to the secrets of the map maker and interpreter is proven by one librarian who wrote recently, "You will never know the feeling of relief I get when I am able to talk about a large or small scale map and know what I'm talking about."

The history of cartography and a review of the vast quantity of literature in this field were summarized in one session. Maps produced in each of the national schools of cartography and singularly important maps and atlases were examined in a second meeting. Also introductory were sessions on library resources, and on map activity——a discussion of the post 1942 cartomania in map publishing, buying, and collecting, of government map depository programs, and of cartographic societies that have encouraged the development of map libraries.

One of the unfortunate situations existing in many libraries is the lack of any clearly-defined program for map acquisitions and the lack of knowledge by the map librarian about available maps. One student admitted he was amazed to learn that maps other than those issued by the Army Map Service and the Geological Survey had been published and would be of interest in his library.

The prolificness of map publishing and the general lack of comprehensive map bibliographies justified spending fourteen sessions on maps and their publishers. General works about cartography, cartobibliographies proper, catalogs of individual map collections, the various separate maps and map series issued by federal, state, regional, and local mapping agencies in the United States and in the other principal map-producing countries, and the lists, catalogs, and index maps describing these maps were given careful review. Maps produced by commercial publishers and professional, learned, business, and automobile associations were also discussed. The problem of acquiring old maps from secondhand dealers was also considered. Other mapping materials——atlases, gazetteers, distance tables, guide books, travel literature, periodicals, and other miscellaneous aids were described briefly.

All map librarians seem to be keenly aware of the problems of map care, classification, and cataloging. Fourteen sessions of the Workshop were devoted to solving these problems. Map storage facilities and map mounting and repair procedures were demonstrated and recommended. Again to provide a common basis for later discussions (six participants had not attended a library school) two lectures on the principles of classification and cataloging were given by Dr. Thelma Eaton, Professor of Library Science.

Many of the large map collections employ their own classification scheme to arrange resources of the library in a logical and useful manner. Some large collections function without a systematic number notation for their maps. All these principal classifications were studied briefly and a more detailed analysis was made of the Library of Congress "G" classification of maps. Advantages and disadvantages of each were noted and the need for some classification was emphasized.

The desirability of having some written record for maps in a library was pointed out in discussions of map cataloging. Several published map cataloging codes were studied and consideration was given to the report on map cataloging by the Geography and Map Division of the Special Libraries Association, which urges that an area-date-subject heading be substituted for the traditional entry by author suggested in earlier codes. Essential features of a map to be noted on a card record were enumerated.

Graphic indexes useful in cataloging set maps, subject and area heading used in map catalogs, the special problem of identification of old maps, and the processing of the Army Map Service depository maps were given consideration. Indexing of aerial photographs and pamphlet material was reviewed briefly.

Suggestions were made in one of the closing sessions of ways to promote the use of maps——a well-organized collection, circulation of materials, exhibits, radio and television programs, newspaper publicity, list of new acquisitions, and offering of a specialized service. In the final session minimum holdings for small or medium-sized collections were outlined and other problems discussed.

Special sessions included a dinner with Dr. Harris F. Fletcher, Professor of English and a Milton authority, telling "How a Scholar Uses Maps," a tour and picnic at Allerton Park, a visit to the Map Room and Mineral Resource Records of the Illinois Geological Survey, and an informal luncheon in the Illini Union on the campus.

Sixty-nine persons have received an introduction to maps and map librarianship since the course in Maps and Cartobibliographical Aids and the occasional summer workshops were initiated. Possibly no more than fifteen are now working full-time with maps but all who are working in libraries or who are professional geographers have received map information of value to them in their positions.

The only similar courses known to be offered are those in Maps and Charts and Introduction of Map Library Techniques being taught by Mrs. Catherine I. Bahn in the U. S. Department of Agriculture Graduate School in Washington. Mrs. Bahn, a trained geographer and an experienced map librarian with the U. S. Aeronautical Chart and Information Center, attended the 1952 Map Workshop.

More geographers and more librarians need to learn about map bibliography and care. It is hoped that geography departments and library schools in other parts of the country will cooperate in offering the necessary training.

THE GEOGRAPHICAL INSTITUTE OF GOTHA, GERMANY*

Erwin Raisz

In 1785, in the little town of Gotha, Thuringia, a young printer published Pifagetta's report of Magellan's voyage. This book had some maps in it that were so successful that young Justus Perthes felt competent to publish more. His fame spread and in 1809 he published J. H. G. Heusinger's Hand-Atlas, and thus laid the foundation of one of the oldest, most prolific, and highly respected geographic-cartographic institutes of the World.

Much of the success is due to Adolf Stieler (1775–1836), a young lawyer, who joined Perthes in 1804. The first installment of the celebrated Stieler Hand-Atlas came out in 1817, the complete edition in 1831. Since that time this atlas had eleven editions and is still regarded by many as the best. Much of the success of the Atlas and the Gotha Institute in general is due to their principle of "incessant modernization."

The next period in the life of the Institute was one of diversification. A school atlas came out in 1821, a history atlas in '23. The Physical Atlas of H. Berghaus in 1838 was the first of its kind. The physical-political school atlas and the wall maps of Emil v. Sydov were imitated all over the world; we still are strongly influenced in style by these century-old maps.

In 1854 August Petermann, coming from London, joined the firm and became one of the leading lights in geography. Petermann's Geographische Mitteilungen first appeared in 1855, and this article commemorates the centenary of this event. The first Geog. Jahrbuch appeared in 1866.

By this time the "Gotha style" evolved fully and gave a lasting expression for the face of maps, not only in Germany but all over the world. Its characteristics, the highly diversified fine lettering, hachuring based on oblique illumination, strip-colored boundaries, delicate waterlines, etc., are familiar in late 19th century maps. This was the "golden age" of Gotha.

Yet there was no decline afterwards. Other establishments, however, largely nurtured in the Gotha tradition, produced excellent works, too. The best

*This article is based largely on: D. W. Horn: Die Geschichte der Gothaer Geogr. Anstalt ... Vermessungstechnik v. 2. Feb. 1954, 4 p.

geographers and cartographers still continued to flock to Gotha. Enough to mention such names as Hassenstein, Habenricht, Alexander Supan, and Herman Wagner. Karl Vogel's "Karte der Duetsches Reiches" in 27 sheets (1:500,000) proved that private cartography can successfully compete with the government in producing medium-scale topographic maps.

In the 20th century the guiding spirit in Gotha was Herman Haack. Few American departments of geography are without the Haack wall maps, which combine altitude tints, hachures and plastic shading, giving striking – if somewhat misleading – concept of the layout of this world.

The Centenary edition of the Stieler Atlas, 1920–25, was a superb piece of work, and the International Edition (each country in its own language) was interrupted by World War II. The war hit hard. The first reports were that the whole Institute was carried away to Russia. Fortunately this was not true and at present the Institute is as busy as ever. It is now called the VEB Geog.–Cartographic Institute, and under the able and active leadership of H. R. Fischer regained and partly surpassed its prewar fame.

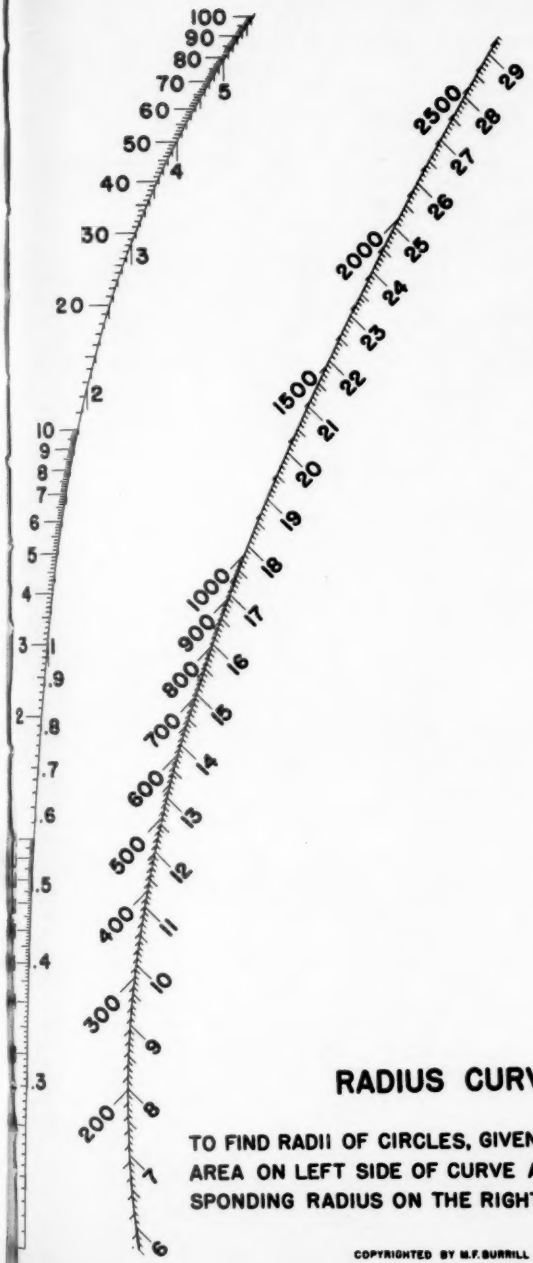
QUICKIE CARTOGRAMS

Meredith F. Burrill

The writer had occasion to prepare statistical cartograms, maps with graphic representation of statistics, under circumstances in which their usefulness was enhanced by every minute saved in preparation. A little experimenting and improvising from materials at hand resulted in a satisfactory technique here described.

The materials involved are a suitable base map, a nomograph, dividers or a draftsman's compass with two needle points, a draftsman's scale with six different graduations, and colored Zipatone. Proportionate area circles were selected as the symbol offering the best combination of readability and ease of construction. Selection of the base map presented no particular problem, since it was possible to use one that carried enough detail to locate the points to which the statistics applied with essentially no sacrifice of readability. The calculation of radii of the proportionate area circles was done with a nomograph that the writer prepared and reproduced for use by his students some twenty years ago. The curve is actually a continuous one on a sheet 24 x 24 inches, broken in the illustration to get it on one page of *The Professional Geographer*. The curve covers a range of numbers from .1 to 2400 plotted on semi-logarithmic cross section paper. The radii are read in units that can be of any magnitude, 1/10, 1/20, 1/30 of an inch or any other. The unit selected was one that would give circles of such size that the smallest ones anticipated would be readily visible and the largest ones would give the impression of localization and not encroach on other circles too much. Since the statistics were not available in advance, the numerical range was estimated on several assumptions and scales suitable to each were selected. As the statistics began to be received a scale was selected and applied to all the figures.

The circles were cut from a sheet of colored Zipatone laid lightly on the base map, using a pair of dividers. Experiments with a knife blade as the cutting instrument were not too successful, but the needle point of the dividers was just right. The dividers were set to the proper radius, using the face of the draftsman's scale graduated in the units selected, pinpointed on the relevant spot, a circle cut cut from the Zipatone and burnished quickly in place. With the preparations described it was possible to put circles on the map at the rate of several per minute after receipt of the statistics.



RADIUS CURVE

TO FIND RADII OF CIRCLES, GIVEN THE AREA, FIND AREA ON LEFT SIDE OF CURVE AND READ CORRESPONDING RADIUS ON THE RIGHT SIDE OF CURVE

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"BALANCED" COLORS FOR USE ON THE MULTI-COLOR DOT MAP

Edwin N. Thomas

One of the most valuable tools of the geographer is the dot map by which the quantitative distribution of a phenomenon can be shown. The geographical value of such maps would be greatly extended if the distribution of several phenomena were depicted instead of just one. In spite of their greater value, multi-color dot maps have been largely ignored because of the faulty visual impressions which often result from the use of more than one color. Such faulty impressions occur when the three requirements necessary to maintain the proper relationships between the colors are not fulfilled. The first requirement is that each color must be distinctive so that it can be differentiated from the colors around it. Second, each color must have equal contrast with the background so the dots can be easily seen. Third, every color must be equally vivid; no color covering a given portion of the map can overshadow any of the others which cover an area of the same size.

These requirements can be satisfied if the characteristics of the colors to be used on the map are evaluated correctly. The three characteristics of a color are its hue, value, and chroma. This paper is concerned with the use of colors which, through consideration of these characteristics, have the "balance" to show the distribution of several phenomena on one map with a minimum of visual misrepresentation.[1] By "balance" the author means the quality of demanding equal attention from the viewer when each color covers the same unit of area. The selection of such colors is greatly facilitated by the work of Albert H. Munsell. Particularly helpful is the *Atlas of the Munsell Color System* to which frequent references are made.

Hue is the name of a color and refers to the visual chromatic sensation, which is commonly identified by color names, such as red, blue, or green. Selection of appropriate hues is the least difficult problem. Each hue must be distinctive and readily differentiated. No hue should be so similar to any of the others that it cannot be readily identified by the viewer. The hues will be most readily distinguishable if they occur widely spaced on a color wheel. Red, yellow, green, blue, and purple are the hues suggested in this paper although there are other possible combinations; the important consideration is that the hues be as equally and as distantly spaced as possible to facilitate their identification by the viewer.

Value is the measure of the relative lightness or darkness of a hue or color.[2] It is dependent upon the percentage of incident light that a color reflects. Munsell graded value in 10 steps from black to white. Black was given a rating of 0 because it theoretically reflects none of the incident light. White had a rating of 10 because it reflects almost all of it. By adding quantities of black or white the amount of light which a color reflects is lowered or raised without changing its hue.[3] (Figure 1).

In the situation represented by 1a, the color pigment reflects all of the incident light. Therefore, its value is 100. The percentage of white light within the total reflected light is the same as standard vermillion red. Therefore, the chroma is 100 (theoretically). In 1b, the color pigment still reflects all of the incident light; its value remains at 100. The amount of white light in the total reflected

[1] Munsell, Albert H. *Atlas of the Munsell Color System.* Boston. Wadsworth, Howland & Co. 1913.

[2] Luckiesh, M. *Color and Its Applications.* New York. D. Van Nostrand Co., 1915. p. 70.

[3] Munsell. *op. cit.* Chart V.

light has increased by 50 percent; the amount of colored light has decreased by the same amount. Therefore, the color is one-half as saturated as standard vermillion red and it now has a chroma of 50 (theoretically).

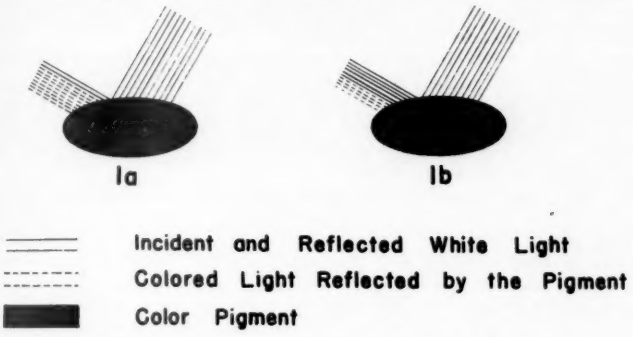

Fig. 1.--The Difference between Value and Chroma

To ensure equal contrast between each color and the background, all of the colors must have the same value. The need for equality of contrast is shown by comparing yellow and blue. Yellow, commonly, has a high value and appears as a light color; the value of blue is usually lower and it appears darker. With a white background, yellow dots will not be as noticeable as the blue ones and the phenomenon represented by the yellow will be comparatively overlooked. Therefore, the value of both colors must be made equal.

It is desirable that the colors to be used on the map reflect 50 percent of the incident light. The colors may be made to stand out equally well against a white background by adding to each pigment a quantity of neutral gray, which lies midway between black and white; the lighter hues can be darkened and the darker ones lightened so that each will reflect the same amount of light.[4] The value of 50 percent reflected light does not coincide with middle gray as determined by the psychologist; it is too dark. It was chosen because a higher value makes the lighter colors too light. A lower value darkens the colors too much and their hues are not easily distinquishable.

Even though hue and value are selected properly, incorrect visual impressions will persist if the chroma of the colors is ignored. The chroma of a color is the measure of its purity or saturation, established by comparing, with a surface of known brightness, the amount of white light in the total light reflected by a color. No pigment color gives off only one wave length of light as do spectral colors. But there are some pigments which give off fewer wave lengths, in addition to those of the dominant hue, than do others. The pigments which reflect fewer additional wave lengths are said to be purer than those which reflect a greater number. All of the additional or secondary wave lengths of light reflected by a pigment combine to form white light. Colors with a greater percentage of white light in the total reflected light are said to be less saturated than colors with a lower percentage. Munsell found standard vermillion red to be the most intense pigment color. He compared all other colors to it to establish their chromas.[5]

[4] Ibid

[5] Idem. Introduction

The need for evaluating chroma is demonstrated by comparing a dull green and a brilliant red. Though both colors reflect the same amount of *total* incident light, and therefore have the same value, the intense red will be more noticeable than the green. The green will not provide a visual impression commensurate with the quantity of the phenomenon which it represents.

The problem of choosing the proper chroma is compounded because blue and green colors are less chromatic than red or yellow, being less intense because their dye pigments are not as pure. Merely using the most intense chroma of each color will not make all of them equally vivid. The strongest chroma which can be used for all the colors in a given group is determined by the purity of the pigments of the color which has the lowest chroma.

The colors here proposed have a chroma rating of 50 percent because of the weakness of blue and green, two of the hues suggested for use on the multi-color dot map. These colors have 50 percent more white light in their total reflected light than standard vermillion red.[6] Admixtures of neutral, middle gray dilute the more intense colors so they have the same chroma as the less saturated colors. Greater amounts of gray make the color less saturated; lesser amounts make it more intense. The percentage of white light is changed without varying the total amount of light which the pigment reflects.[7] Thus, all the colors can be made of equal chroma so that no color is more noticeable than any of the others.

Colors which will faithfully show the distribution of as many as five different phenomena on a multi-color dot map can be selected if their characteristics are evaluated according to the color requirements of that particular type of map. Colors so selected were tested on fifteen geography students at Northwestern University during the summer of 1954. The outcome of the test, considering individual differences in color perception, indicates that the colors are "balanced" and have the qualities requisite for use on the multi-color dot map. The three requisites of the multi-color dot map are: each color must be distinctive; contrast between each color and the background must be equal; and all the colors must be equally vivid. A properly selected difference in hue will ensure that each color is distinctive.[8] The colors will contrast equally with the white background if their value is identical. The intensity of the impression which the eye receives will be the same if their chromas are equal. The use of colors chosen in this way should make multi-color dot maps which are visually accurate and which thus will facilitate regional portrayals.

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[6] Idem. Chart V.

[7] Luckiesh, M. op. cit. pp. 70–73

[8] For an excellent discussion of the basis and the causes of differences in color perception see C. E. Gray, D. C. Kimber, and C. E. Stackpole, *Textbook of Anatomy and Physiology* (11th ed.; New York: Macmillan Co., 1947), 527; and George Wald, "Molecular Basis of Visual Excitation," *American Scientist*, Vol. 42 (January, 1954), 73–95.

PERCENTAGE ISOPLETH MAPS

J. Ross Mackay

Although the meaning of "isopleth" has not achieved dictionary status, the present tendency is to define an isopleth as an isoline of assumed constant value, and the word is used in that context in the following discussion. The value of an isopleth is obtained from a comparison of two kinds of data which are usually expressed in ratio form, e.g. population over area equals density of population. The dividends and divisors of most ratios refer to statistical units, such as

townships. On occasion it may be desirable to have the ratios of isopleths relate to the sum of all the dividends and divisors, rather than to the values of individual statistical units, e.g. to the total population and total area, rather than to the population and area of the individual township. A percentage isopleth map is one type of map that is constructed with reference to the sums of the dividends and divisors.

The principle underlying "percentage isopleths" is not new, although the writer is unaware of its adaptation to geographic purposes. Percentage isopleths are used in petrofabric analyses with the Schmidt net, the latter being familiar to geographers as the equatorial case of the Lambert azimuthal equal area projection.

A description of the properties and construction of a percentage isopleth map is most readily obtained by taking a practical example. As an illustration, let us consider the four steps in construction of such a map for Canada using the 1951 census figures of a population of 14,009,429 and an area of 3,845,774 square miles.

1. Draw a percentage dot map for Canada letting each dot represent a convenient percentage of Canada's total population, e.g. 0.1 percent or 14,009 people.
2. Draw on a transparent medium, such as plastic, a circle--a hexagon or square would do also--with an area representing a convenient percentage of Canada's total area, e.g. 0.1 percent or 3,846 square miles. The base map should be an equal area map or one so nearly equivalent that areal errors are negligible.
3. Use the transparent circle as a counter to obtain the number of dots *per unit circle area* over the entire map, e.g. if there are 8 dots within the area of the circle at location X, 8 is recorded at X, preferably on a separate base map. Each number indicates what percentage of the total population occurs within a unit circle area at the location of the number.
4. Draw isopleths with reference to the numbers on the base map. The isopleths are labelled to read in percent, e.g. 0.5 percent, 1 percent, etc. The percent value gives the proportion of the total population that lies within the *unit area* of the counter circle, and so the unit area should be shown on the map key.

Percentage isopleth maps have several advantages. They make it possible to determine what percentage of the total distribution lies within a unit area, or multiple of it. They may be calibrated to give the percentage of the total distribution that lies between any two isopleths. This is most easily done by counting the number of percentage dots in such a belt, expressing it as a percentage of the total, and then shading the belt by proportional shading to show the percentage. In a series of percentage isopleth maps showing the changes in time and space of a distribution, the percentage isopleth map is usually more sensitive to overall changes than other types of quantitative distribution maps. This is because any change in the distribution in one part of the map has an effect upon the percentage distributions of the other parts. For example, the recent rapid increase in the population of western Canada has no effect on the population density or distribution of Prince Edward Island's virtually stationary population when ordinary isopleths or dots are used on 1941 and 1951 maps. However, the percentage contribution of Prince Edward Island's population has changed and would be so shown by comparing percentage isopleth maps of the two periods.

The maps are excellent for the study of interrelationships and statistical analyses of correlations. If one distribution varies directly as another in the same area, the deviations between their isopleths when expressed as a difference will be relatively constant. If the distributions vary inversely, then the sum of their isopleth values will be relatively constant. Percentage isopleth maps may well be used with percentage dot maps, because they complement each other.

These advantages recommend the use of percentage isopleth maps, especially as a technique for studying interrelationships and for correlation analyses, but their greatest value may lie in their usefulness as another tool for cartographic research.

MAP OF THE ROMAN EMPIRE 1:1,000,000

Marie C. Goodman

An article not likely to come to the attention of many geographers appeared in the *American Journal of Archaeology* (v. 48, no. 1, Jan. 1954, p. 45–51). Entitled "Tabula Imperii Romani," it is a sketch by Freeman W. Adams of the history and present status of the International Map of the Roman Empire.

This historical map had its origin when the 1928 International Geographical Congress appointed a Commission to prepare such a map. The Director–General of the British Ordnance Survey was the presiding officer and there were eminent representatives from England, Italy, France, and Spain. The Commission stressed that the map "was to be historical and not archaeological; not to serve as a guide or index map of ancient monuments, but to show as far as possible the distribution and character of population in Roman times, the Roman names of towns and natural features, and the economic and social conditions of the period." The base map would be the International Map of the World 1:1,000,000.

Four sheets: Edinburgh, Roma, Porto, and Madrid were presented to the 1931 Congress in Paris. Later that year the Commission passed its functions to the Central Bureau of the International 1/M Map located at the Ordnance Survey offices. Representatives from Germany and Portugal joined the group. The cooperation of the Egyptian government was obtained and the collaboration of scholars in Switzerland, Austria, and Hungary was secured.

The 1934 Congress witnessed the addition of six more sheets: Firenze, Lyons, Alexandria, Cairo, Aswan, and Wadi Halfa. In 1935 the Commission met again and plans for the future of the map seemed secure. Fifty-six sheets were projected. There would be a descriptive pamphlet and index accompanying each sheet written in Latin and another language chosen by the country publishing it. The next few years brought an end to the progress. Only one more sheet was published: Mainz (edited in 1940 but was not distributed until 1949). This important historical map was not included on the official agenda for the International Geographical Congresses in 1938, 1949, and 1950. In fact the fundamental project of the International 1/M Map itself lapsed with the beginning of World War II. After the war the Central Bureau remained technically in the office of the Ordnance Survey but its status was uncertain. At the 1952 Congress a Commission on the International 1/M Map with John K. Wright as Chairman recommended the transfer of the Central Bureau to the United Nations.

In spite of apathy and delay "Tabula Imperii Romani" has not been completely abandoned. The preparation of a map of Libya was sponsored by the Libya Map Committee and reconnaissance of the terrain was carried out in 1951 by Ward Perkins, Director, and R. G. Goodchild, Librarian of the British School at Rome. In 1954 the results, sheets HI 33 Lepcis Magnus and HI 34 Cyrene, were published by the Society of Antiquaries of London. This publication may well stimulate other countries to produce additional sheets. Sales of the Ordnance Survey Map of Roman Britain have proven the popular interest in history and archaeology. There is no reason why the proposed map of the Roman Empire should not also ultimately be a profitable venture.

THE JAMES FORD BELL COLLECTION

Hildegard Binder Johnson

This private collection of books and maps relating to the history of discoveries and exploration was made available to scholars and the public in general by the establishment of the James Ford Bell Room on the main floor in the library of the University of Minnesota on October 30, 1953. The exquisite character of the growing collection of rare books important to historical geography may best be illustrated by naming a few titles from a long and impressive list, such as Marco Polo's first printed account of his travels of 1477, a 1482 edition of Ptolomey's *Cosmographia*, the *Epistola* of Columbus of 1493, Vespucci's *Mundus Novus* of 1504, Martin Waldeemüller's *Cosmographiae Introductio* of 1507, and Champlain's *Des Sauvages* of 1603. All books are in perfect or nearly perfect condition and in original bindings.

The collection has the somewhat unusual distinction of having three of the four earliest printed maps that show anything of the New World: The Contarini map of 1506 is in the British Museum. The Waldseemüller map of 1507, the first map that shows the word "America" and became the object of some publicity after the New York Times of May 9, 1950 printed a facsimile and announced that bids at a prospective auction must exceed fifty thousand dollars, found its way to the Bell collection. So did the Ruysch map of 1508 and another Waldseemüller map of 1509. The item perhaps most exciting is the drawn and painted nautical chart of 1424 which shows the island of Antilia next to a red rectangle in the Atlantic Ocean. The chart was discovered when the large remaining part of the fabulous collection of Sir Thomas Phillips was unpacked in London after 1946. Professor Armando Cortesão of the University of Coimbra studied the chart and its history for five years before it came to Minneapolis. He is at present the most ardent proponent of the Portuguese theory of pre-Columbian discovery of North America, explained in *The Nautical Chart of 1424*, University of Coimbra, 1954. Both the Waldseemüller map of 1507 and the nautical chart of 1424 are reproduced and written up in Alvin M. Joseph's article "Was America Discovered Before Columbus?" in the April 1955 issue of *American Heritage*.

The collection represents probably the most complete source of information with respect to American Indians of the St. Lawrence–Great Lakes region and has a nearly complete set of Jesuit Relations. It is constantly being augmented and plans to include as many important sources as possible relative to early trade and transportation routes, not restricting itself to America. It is interesting to note that so far even the most intent search has not brought to light any original map showing any Indian trade routes prior to white man's occupancy.

The University of Minnesota press published a first, richly illustrated catalog *Jesuit Relations and other Americana in the Library of James F. Bell*, by Frank K. Walter and Virginia Doneghy, 1950, and a second catalog *A List of Additions 1951–1954*, October 1955. The first volume which sold originally for twenty-five dollars is still available in a few copies together with the second catalog for fifteen dollars. Periodical publications of additional catalogs and an annual special publication featuring one of the rare non–English books in translation are planned. The collection deserves watching by historians of cartography and historical geographers. Scholars will find its material readily accessible in pleasant surroundings, but out-of-town readers are advised to contact John Parker, curator of the James Ford Bell Collection, before they come to work in the library.

TREASURER'S REPORT, FIRST HALF FISCAL YEAR 1955

In accordance with the directive of the Council in the Annual Meeting in Memphis, April 12, 1955, here is presented the Treasurer's Report for the first half of fiscal year 1955. This report has been audited and approved by Harry Ketchum, Association auditor.

It will be noted that for the half year there is an excess of receipts over disbursements of $4,951.28. These disbursements do not include the payments to the Divisions of $730.50, which was made on July 7th. Also, the greater proportion of the dues from the membership is received during the first half of the year.

The Finance Committee has undertaken a review of the security holdings in the portfolio and it is expected that significant changes will be made in the Association holdings during the second half of the year. This will be designed to strengthen the investment condition of the Association. With the transfer of the bulk of the routine accounting work to the Central Office, the Treasurer has been able to devote more time to consideration of the problems of the portfolio.

SUMMARY OF RECEIPTS AND DISBURSEMENTS
December 16, 1954 to June 15, 1955

Receipts		
Dues	$11,859.70	
Sales – Annals		
Back Numbers	110.20	
Subscriptions	1,019.73	
Reprints	166.81	
Sales – Professional Geographer	778.10	
Sales – Nature of Geography	229.30	
Sales – American Geography	1,977.75	
Sales – Careers in Geography	4.00	
Securities Income	153.50	
*Misceallaneous	724.56	
Total Regular Receipts		$17,023.65
Disbursements		
Publication of Annals	$ 4,205.86	
Professional Geographer	1,296.15	
American Geography	8.00	
Careers in Geography	35.00	
Nature of Geography	---	
Central Office	3,339.44	
Officers	19.81	
Committees	373.19	
Regional Divisions	183.64	
Travel	1,526.44	
Treasurer	109.79	
Miscellaneous	175.05	
Total Regular Disbursements		11,272.37

Securities	300.00	
Grants	500.00	800.00
Total Disbursements		$12,072.37
NET INCREASE		$ 4,951.28

*Includes $570.00 net income from Memphis meeting.

MONTREAL MEETING OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS
April 1956

The closing date for the submission of titles and abstracts for inclusion in the Montreal meeting is December 1, 1955. Following that date, the Program Committee will arrange sessions on the basis of possibilities indicated by the titles and abstracts themselves. At the time of preparation of this notice (late October) it appears that there will be a session on climatology and another on geography of manufacturing. Other widely diverse interests have been indicated.

The condition of abstracts which have been received is far superior to that in previous years, yet there still remains some variation. This variation makes editing particularly difficult. In the hope of still greater improvement, the rules printed in the September issue of *The Professional Geographer* are herewith repeated.

Abstracts must conform to the following rules:

1. Abstracts must be typed and must be submitted in triplicate.
2. The original must be on a good weight, white paper 8½" x 11".
3. Abstracts must be double spaced with reasonable margins.
4. The name of the author must appear at the head of the abstract typed in upper-case letters and beginning at the left hand margin.
5. The title of the paper should begin two lines below the author's name and at the left hand margin. It should be typed in both upper- and lower-case letters *and* should be underlined.
6. The body of the abstract should begin two lines below the title and should be typed with paragraph indentations.
7. The abstract should be truly informative.
8. The abstract should not exceed 250 words.

Abstracts that do not conform to these rules will be returned to their authors with requests for corrections when program selection is made by the committee.

The committee will be guided in its selection of papers to appear on the program by two major considerations: 1) the mtainenance of as high standard as is compatible with the material submitted, and 2) the available time.

Topics for the informal discussion sessions have not yet been fixed, though a poll of committee members is in progress. To date 22 different topics have been suggested to the committee. There are only eight possible sessions. Obviously certain specific interests will have to be omitted.

The Program Committee still welcomes suggestions. For that reason, the membership of the committee is appended.

Charles M. Davis (University of Michigan)
Jordan A. Hodgkins (University of Cincinnati)
Trevor Lloyd (Dartmouth College)
Richard Logan (University of California at Los Angeles)
Harold Mayer (University of Chicago)
Harold A. Wood (McMaster University)
Henry M. Kendall, Chairman (Miami University)

REGIONAL DIVISIONS

MIDDLE ATLANTIC DIVISION

About 50 people attended a dinner meeting at Fort Belvoir on September 27 and were taken on a well-planned tour of the various sections of the Topography Department. Methods and techniques used in training for all aspects of Army topographic surveying and mapping were discussed, with appropriate exhibits.

At the October meeting Robert F. Thurrell, Jr., Executive Director of the International Resources Engineering and Exploration Group, spoke on "Aerial Photography – Key to Modern Surveys." His talk was followed by a 3–D movie entitled "A Third Dimension in Oil." Lloyd Black led the discussion.

Dr. J. Slayton Jenner will be the speaker at the November 16 meeting. The annual meeting of the Division on December 3 will feature symposiums on: Photo-interpretation in Geography, The Potomac Valley, and Education in Geography.

GREAT PLAINS– ROCKY MOUNTAINS DIVISION

The annual meeting of the Great Plains–Rocky Mountains Division convened in Salt Lake City on October 7–8, 1955. Twenty-five members and guests participated in an excellent program. At the Annual Banquet, Professor Albert Smith gave as his Presidential address an illustrated lecture on "The Role of the Kauri Gum Industry in the Geography of Northland, New Zealand." At the business meeting, Elbert E. Miller of the University of Utah was elected President and Thomas Griffiths of Denver University was elected Secretary and Chairman of Local Arrangements. The President and Secretary were authorized to determine each year the use to be made of the funds allocated to the Division by the Association.

On October 8, a 100-mile field trip around the Salt Lake Valley was led by Professor Miller. Professor H. Bowman Hawkes and Dr. Vasyl Gvozdetsky of the University of Utah lectured on Utah's history, Lake Bonneville, the geologic history of the Wasatch Mountains, and fossil soils. Mr. Scotty Robinson of the Kennicott Copper Corporation lectured on the operations of his company.

The annual meeting next year will be in Denver.

NEW YORK METROPOLITAN AREA DIVISION

The first Divisional meeting of 1956 will be held at the American Geographical Society on Monday, January 9, at 8 P.M. A symposium on "The Case for British Caribbean Federation" will be conducted by four A.A.G. members, two of whom will be guests from our neighboring Divisions. Panelists are: John P. Augelli (University of Maryland), Lewis M. Alexander (Harpur College), David Lowenthal (Vassar College), and Peter M. Stern (Conservation Foundation, New York).

WEST LAKES DIVISION

The annual meeting of the West Lakes Division on October 14–15 at Madison, Wisconsin, was attended by about 100 members. There were sessions for presentation of papers, a banquet, and a business meeting at which Robert L. Carmin was elected Chairman of the Division. The meeting next year will be held at the University of Illinois.

ANNOUNCEMENTS AND REPORTS

GOVERNMENT AGENCY CHANGES

The former Area Development Division in the Office of Technical Services, Department of Commerce, has been raised to the status of an Office, by Departmental Order. The Office is responsible for providing technical assistance in establishing new industries based on local resources, expanding existing industries, stimulating industrial diversification, and assistance to industrial problem areas. Victor C. Roterus is Director of the Office.

The former Division of Geography in the Office of the Secretary of the Interior has been redesignated the Office of Geography, by Departmental Order.

BGN–PCGN CONFERENCE

Representatives of the Board on Geographic Names and the Permanent Committee on Geographical Names for British Official Use (PCGN) met for discussions of common problems on October 4–6 in London. The meeting brought agreement on a common system for the transliteration of geographic names from Arabic, a significant step toward international standardization. A number of procedural matters were agreed to and common understandings reached on broad policy that will have the effect of still further increasing the interchangeableness of material produced by the two organizations.

The conferees from the United States were: H. Thompson Straw, BGN chairman; Robert J. Voskuil and Frank Shepard, members of the Board; Meredith F. Burrill, Executive Secretary; Allen Belden, Chief of the Research Branch of the Office of Geography; John G. Mutziger, Chief of the Linguistics Section; and, Harold W. Glidden, member of BGN's Advisory Committee on Arabic and Persian.

THE 1955 JUNEAU ICE FIELD RESEARCH PROJECT, ALASKA

The American Geographical Society sent an eighth expedition to the Juneau Ice Field during June and July. This upland névé from which such well known glaciers as the Taku and Mendenhall flow is in the coastal mountains north of the capital city. Although concerned with the year to year changes of the ice field as a whole, the expedition placed particular emphasis on Lemon Creek Glacier as it did in 1954. Studies were essentially tripartite and were pursued taking consideration of the International Geophysical Year 1957–58 at which time Lemon Creek Glacier will be one of three major areas of study in the U. S. Glaciology Program. The hydrological status of the glacier was evaluated for comparison with earlier records; the glacier was mapped by means of photogrammetric survey; and an effort was made to determine the glacier's thickness using seismic methods. A total of fifteen men participated in the course of the two months studies. Dr. Calvin J. Heusser was Project Officer and Edward R. LaChapelle was in charge of the field party.

LAND USE MAPS OF NEW ZEALAND'S URBAN AREAS

Glossy prints (8 x 10 in.) of 47 New Zealand cities and towns have been received by the Library of Congress Map Division from L. L. Pownall, Senior

Lecturer in Geography at Canterbury University, Christchurch, New Zealand. The land use patterns show very clearly in black and white the industrial areas, central business district, residential and recreational areas, public buildings, educational centers, hospitals, cemeteries, orchards and gardens, and urban political limits. Mr. Pownall has placed no restrictions on the reproduction or use of these up-to-date land use maps, but due to technical difficulties of photo-reproduction in New Zealand, he has indicated that anyone in the U. S. desiring copies should get them through the Library of Congress. Negative photostats cost 45¢ each, and negative microfilm of the 47 maps may be purchased for $1.88. An additional charge of 25¢ is made for packaging and mailing.

These maps were prepared as part of Mr. Pownall's doctoral dissertation, and supplement his article on "The Functions of New Zealand Towns" in the December 1953 issue of *The Annals*. He hopes to spend the academic year 1956–57 in the U. S. to study urban geography at academic and practical planning levels, with special reference to problems of residential decay and succession. His professional and rather extensive publication records are available through the AAG Central Office to those who might wish to engage him in teaching or research for the year.

--- Arch C. Gerlach

ASP–ASCM MEETINGS

The American Society of Photogrammetry and the American Congress on Surveying and Mapping held their 21st and 15th Annual Meetings, respectively, in Washington, D. C., March 7–11, 1955. For the first time the two Societies held consecutive meetings thus providing an excellent opportunity for both exhibitors and registrants to have the benefit of the two groups. Over 1,800 persons registered for the meetings and an estimated 1,000 additional persons reviewed the exhibits. Approximately 70 papers in addition to several panels were presented including the participation of several geographers. Exceptionally impressive were the 64 exhibits presented by numerous commercial companies as well as several governmental agencies. The theme of the meetings emphasized the close relationship between photogrammetry, surveying, and mapping. Especially interesting to geographers who concentrate in the field of cartography were papers dealing with Photo Interpretation Keys, Boundary Problems associated with the Continental Shelf, and Developments of Cartographic and Reproduction Techniques in Chart Production. It is hoped that these and others will be published in the forthcoming issues of *The Surveying and Mapping Journal*. There is no doubt but that the consecutive meetings of the ASP and ACSM were the most effective of either organization to date.

--- Robert J. Voskuil

OPPORTUNITIES FOR GEOGRAPHERS IN ACIC

One of the larger concentration of geographers outside of the Washington, D. C. area is that found in St. Louis. Here is located the Headquarters, Aeronautical Chart and Information Center. The mission of ACIC, an activity of MATS' Air Photographic and Charting Service, is to produce all aeronautical charts and related publications used by U. S. military aircraft throughout the world.

Of the thirty-five hundred divilians employed by the ACIC, approximately sixty-five hold degrees with majors in geography. Numerically, geographers in ACIC are almost equally divided between the ACIC, St. Louis, and ACIC's Detachment Number 1 in Washington, D. C. In ACIC, St. Louis, geographers with advanced degrees comprise one-third of the total. Two-thirds of the total number have been employed at ACIC, St. Louis, for a period of two years or less.

Few positions in ACIC have the title of Geographer. Most of the geographers are designated as Cartographers and are engaged, by and large, in the editing phase of aeronautical chart production. They edit compilations of charts prepared from map sources, color separation drawings, final negatives, and press plates.

A relatively small number of geographers are assigned to planning and operational functions. Others are engaged in preparing aeronautical information publications. The remaining geographers are assigned to various positions throughout the Production and Distribution Plant.

In addition, a large number of geographers are employed in the ACIC's Detachment Number 1 and perform chart research.

A number of the personnel now employed at ACIC are pursuing geographical courses of study through on-the-job training and evening classes.

Graduates of colleges and universities have excellent employment opportunities with the ACIC. Training in geography, geology, mathematics, art, and other similar fields or courses of study can qualify applicants for consideration in cartographic positions. Beginning salaries, depending on education and experience, range from $3,670 to $6,390 per year.

Persons interested in employment at ACIC should file an application for Federal Employment, Standard Form 57, and submit it to the Civilian Personnel Office, Aeronautical Chart and Information Center, 2nd and Arsenal Streets, St. Louis 18, Missouri.

--- Benjamin F. Holmes

SOCIETY OF WOMAN GEOGRAPHERS FELLOWSHIP

The Society of Woman Geographers is offering a Fellowship of $1,600 for graduate work in geography at Columbia during the academic year 1956–57, to a young woman to be selected. Applicants, to qualify, must be eligible and acceptable for admission to Columbia University under the Graduate Faculties and have a BA degree or its equivalent. A good background in the social sciences and in general geology or geography is desirable, but candidates who have given evidence of superior ability in other fields are also eligible.

Application for the award must be made on the Columbia University fellowship application form with an indication that it refers specifically to the *Society of Woman Geographers Fellowship in Geography.* Qualified applicants will also be considered for the award of other fellowships, scholarships, and grants-in-aid offered by Columbia University.

An announcement describing the graduate courses in Geography and the requirements for the Master of Arts and Doctor of Philosophy degrees, application blanks for awards, and any further information may be obtained by writing to:

Office of University Admissions
322 University Hall – Columbia University
New York 27, New York

Applications for the Fellowship must be received on or before February 20, 1956. Applicants will be advised of the award on or about April 1, 1956.

DAS DEUTSCHEN GEOGRAPHENTAG

Das Deutschen Geographentag, held in Hamburg July 31 to August 6, 1955, was a notable landmark in *das wiederaufbau* of post-war German geography, which might have served as a more appropriate theme for the meeting rather than "*Das Geographische Weltbild der Gegenwart.*" The solidarity and substance of this restoration of German geography was an inspiring sight. Fifteen hundred registered

participants, two hundred of whom had obtained permission to come from the eastern part of Germany, crowded into the large *Hörsaal A* of the University of Hamburg, overflowing into the aisles for each meeting. C. Troll, of Bonn, one of the primary architects of this restoration, gave a paper based on his recent journey to Mexico, throwing new light on the tropical-temperate highland transition between puna and conifer vegetation in the northern latitudes 18° to 23°. Other contributions were made by J. Büdel of Würzburg, who in discussing the development of Ethiopia, showed that country's tenuous link to western culture provided by the Emperor and a few dozen trusted members of his royal household; and by W. Hebebrand of Hamburg, who with numerous maps and photographs described the planned restoration of Hamburg, so striking to all who had seen the heaps of rubble that marked the city in 1945. A notable experience, too, in professional fellowship was the Geographentag excursion (7 a.m. to 11 p.m.) in a new German steamer through the Elbe estuary to Helgoland, the battered island symbol. Everywhere, and especially in Helgoland, *das wiederaufbau.* One must express the wish that Germany will continue to have the enlightened leadership which has facilitated its post-war recovery.

—— Malcolm J. Proudfoot

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, SECTION E, 1955 MEETING

The annual meeting of the Geography Section (E) of the British Association for the Advancement of Science took place in Bristol from August 31 to September 7, 1955, under the Presidency of J. N. L. Baker of Oxford, with approximately 300 members in attendance. As is customary, the initial emphasis, with five papers, concerned Bristol and the surrounding region in deference to the University of Bristol, the host institution. One of these papers, that by F. G. Hannell, discussed the wider ramifications of Britain's "transitional" climatic character, using Bristol and Kew as the base. Another, that by S. W. Wooldridge, placed Bristol into the eastward orientation of the post-tertiary drainage pattern of southeast England. J. N. L. Baker, in his Presidential address "Geography and Its History," provided much that was new for the 16th, 17th, and 18th centuries, reaching the sensible conclusion that "there have been many kinds of geography and many writers of geography, and that present day geographers should be modest and circumspect in their claims."

The emphasis of the meeting was on the physical aspects of geography, especially if one includes the excursions as part of the general impression, although noteworthy exceptions were provided by J. W. Birch whose paper dealt with "Two Aspects of Pioneering in Canada," and R. H. Osborne's paper on "Internal Migration in England and Wales." The foreign guests honored by the Section were N. Nielson of the University of Copenhagen who discussed his geographical research program in northern Slesvig pertaining especially to coastal tideland reclamation, and M. J. Proudfoot of Northwestern University, representing the Association of American Geographers, who discussed "the fragmental political structure of Chicago."

—— Malcolm J. Proudfoot

ICAO MEETING ON FACILITATION OF INTERNATION TRAVEL

The Facilitation Division of the International Civil Aviation Organization, meeting in Manila in October, worked out some 70 recommendations to the ICAO Council, designed to make international travel simpler and cheaper. The recommendations include acceptance of oral passenger baggage declarations,

simplification and later elimination of embarkation/disembarkation cards, and extension of validity of entrance visas to 12 months. A number of other recommendations are designed to reduce waiting time on the ground. The United States was one of the 23 countries represented at the meeting.

JOHN HAY WHITNEY OPPORTUNITY FELLOWSHIPS

The John Hay Whitney Foundation has announced availability of Opportunity Fellowships open to United States citizens of demonstrated ability who have not had full opportunity to develop their talents for such reasons as racial or cultural background or region of residence. Candidates between 22 and 35 years old will be given preference. Awards, normally between $1,000 and $3,000, may be used for graduate study or any sort of training or experience for a full year, are renewable in special cases, and may be used to supplement other grants. Completed applications must be filed by November 30. Awards are announced in April or May. Address: Opportunity Fellowships, John Hay Whitney Foundation, 630 Fifth Ave., New York 20, N. Y.

NEW NAS–NRC FOREIGN AREA PROGRAM

The National Academy of Sciences–National Research Council has initiated an Office of Naval Research sponsored geographical field research program, to stimulate work on foreign areas by young Americans, including geographers in various branches of the field. It is primarily to aid doctoral dissertation field research but does not exclude more advanced scholars. Grants will vary with need, usually covering travel, field and living expenses but not salary or stipend. Applications for field work during 1956 must be submitted by December 1, addressed to: Foreign Field Research Program, Division of Earth Sciences, National Research Council, 2101 Constitution Ave., Washington 25, D. C. Instructions for applying will be sent on request.

COMMITTEE ON GEOGRAPHERS IN GOVERNMENT SERVICE

The membership of the new Committee on Geographers in the Government Service has recently been established by the Council. The members are: James A. Brammell, Chairman, Carleton P. Barnes, Meredith F. Burrill, Herman R. Friis, Richard N. Hall, Alvin A. Munn, Louis O. Quam, Gordon E. Reckord, John Roscoe, Vincent M. Throop, and Leonard S. Wilson.

THESIS TITLES

Thesis titles are published in the March and November issues of *The Professional Geographer.* Titles should be submitted to Leslie Hewes, University of Nebraska, Lincoln 8, Nebraska, by February 1 and October 1, respectively.

Ph.D. Dissertations Completed

ADIBI, M. Ali "A National Plan for Land and Water Resources in Iran." Teachers College, Columbia University, February 1955.* Microfilmed.

ALDRICH, C. C. "The Geography of Johnston County, Missouri." Louisiana State University, 1955.*

ALEXANDER, Charles "The Geography of Margarita and Adjacent Islands, Venezuela." University of California, Berkeley, 1955.

BACON, H. Phillip "The Historical Geography of Ante-bellum Nashville." George Peabody College for Teachers, August 1955.* Microfilmed.

BAILEY, Perry L. "The Role of the Economic Geographic Factors in the Origin and Growth of Grand Rapids, Michigan." Ohio State University, June 1955.

BALLABON, Maurice B. "Aerial Differentiation of the Manufacturing Belt in Central Canada." McGill University, September 1955.*

BJORKLUND, Elaine M. "Focus on Adelaide: Functional Organization of the Adelaide Region, Australia." University of Chicago, September 1955. Department of Geography Research Paper No. 41. Microfilm available through University of Chicago libraries.

CARMIN, Robert L. "Urban Pattern and Regional Function of Anapolis, Goiaz, Brazil." University of Chicago, December 1953. Department of Geography Research Paper No. 35. Microfilm available through University of Chicago libraries.

COHEN, Saul "Haifa, Israel's Link to the World: The Political Geography of the Port and Its Environs." Harvard University, December 1954.*

DIERICKS, C. Wallace "Magugu—A Land Utilization Study of a Native Resettlement Project in Tanganyika." Northwestern University, June 1955.*

DUNCAN, Craig "The Saskatchewan River Basin, Canada: A Geographical Appraisal of the Water Resources." Ohio State University, June 1955.

ERICKSON, Sheldon D. "Occupance of the Upper Deschutes Basin, Oregon." University of Chicago, December 1953. Department of Geography Research Paper No. 32. Microfilm available through University of Chicago libraries.

FELLMANN, Jerome D. "Truck Transportation Patterns of Chicago." University of Chicago, September 1950. Department of Geography Research Paper No. 12. Microfilm available through University of Chicago libraries.

FLIERL, Howard H. "The Land Use of the Middle Schoharie Valley." Syracuse University, January 1955.*

GROTEWOLD, Andreas "Regional Changes in Corn Production in the United States from 1909 to 1949." University of Chicago, June 1955. Department of Geography Research Paper No. 40. Microfilmed.

HARPER, Robert A. "Recreational Occupance of the Moraine Lake Region of Northeastern Illinois and Southeastern Wisconsin." University of Chicago, September 1950. Department of Geography Research Paper No. 14. Microfilm available through University of Chicago libraries.

**Available for inter-library loan*

HIRT, Howard F. "A Field Study of Pioneer Settlement in Northern India." Syracuse University, July 1955.*

HOTCHKISS, Wesley A. "Areal Pattern of Religious Institutions in Cincinnati." University of Chicago, September 1950. Department of Geography Research Paper No. 13. Microfilm available through University of Chicago libraries.

HTOO, Tin "Changes in the Distribution and Functions of Nucleated Settlements in Lewis County, New York, between 1900 and 1950." Syracuse University, October 1954.*

KIANG, Ying-cheng "Geography of the Institutions of Higher Education in China." Teachers College, Columbia University, April 1955.* Microfilmed.

LAIDIG, Kermit M. "Land Use in Southeastern Puerto Rico." University of Nebraska, June 1955.* Microfilmed.

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NEWS FROM GEOGRAPHIC CENTERS

FLORIDA STATE UNIVERSITY

The Department of Geography will serve as host for the 1955 meetings of the Southeast Division of the A.A.G. on November 22 and 23, following a meeting of the Executive Council on the 21st. Henry F. Becker, Department Head, is Vice-chairman of the Division and this year's program chairman.

Mr. Becker, for several years Chairman of the Florida Resource Use Education Committee appointed by the Governor, heads the planning committee for the Governor's Citizens' Conference on Conservation to be held in Tallahassee next spring.

A complete revision of the book *Florida: Wealth or Waste?* was completed last year under Mr. Becker's direction and is available for use in Florida public schools for the first time this fall. The original volume was published in 1946. David E. Christensen, Assistant Professor, directed the cartographic work for the book, which was published by the State Department of Education.

The Department's Resource Analysis Center, embarking upon its third year as an aid to cooperative research, has established a research and consultative relationship with the Central and Southern Florida Flood Control District, whose headquarters are in West Palm Beach.

Harry F. Brubaker, Assistant Professor, and Mr. Becker recently prepared a report entitled "Population Supporting Potential of Florida Resources by County Groups" for the Commission for the Study of Higher Education in Florida, to be used in planning for the future development of the state's educational institutions. Their work was done within the framework of the Resource Analysis Center.

Dr. John H. McMurry, Associate Professor, and Mr. Christensen, also in the name of the Resource Analysis Center, co-authored a special "Report to Governor's Citizens' Committees on Administration of Resources in Florida" at the request of the Governor's Office. The report was prepared for possible use by legislative committees during the 1955 Florida Legislative Session in revamping resource administrative policy and organization.

Dr. McMurry is continuing field work under his O.N.R. contract. He is engaged in shore line mapping and classification along the Gulf of Mexico between Tarpon Springs and Panama City. For much of the work Dr. McMurry uses his sloop "Elaway," which is based at the F.S.U. Oceanographic Institute at Aligator Harbor. Two staff members of the Geography Department, Dr. McMurry and Harrison V. Chase, Assistant Professor, represent the Department in the Oceanographic Institute and have access to the research facilities of that organization.

Mr. Chase is co-author of a textbook, *Preface to the Social Sciences*, which is to be released by McGraw-Hill in June. Professors Bellamy, Young, and Thursby of the F.S.U. Departments of Sociology, Economics, and Political Science, respectively, collaborated with Mr. Chase in the work.

Dr. John O. Boynton has been promoted to Associate Professor and is continuing his work in Community Resources Education in various parts of the state. This fall he is conducting extension courses in Jacksonville and Fort Lauderdale in addition to his campus classes. Citizens' committees for committees for community improvement have been established in several North Florida communities in the past four years as a result of his work.

Burke G. Vanderhill, Assistant Professor, current Chairman of the Social Sciences Section of the Florida Academy of Sciences and ex-officio member of the

Academy Council is organizing the social sciences program for the December meetings at the University of Miami, Coral Gables.

Three members of the Department expect to receive the doctoral degree during the present academic year: Vanderhill and Brubaker from the University of Michigan, and Christensen from the University of Chicago.

OREGON STATE COLLEGE

Mr. Larry Gilmore has been appointed Acting Part-time Instructor in Geography. He has a Bachelor's degree from Oregon State College. Miss Barbara Hawn has been appointed Acting Instructor in Geography and has a Bachelor's degree from Western Washington College of Education.

Miss Barbara Hawn spent much of the summer carrying out field work in the tin mining area at Lost Creek in western Alaska. Financial aid was received from the Arctic Institute to permit field study. The project is being carried out as part of her Maste. degree thesis, The Historical Geography of Tin Mining at Lost River on the Peninsula.

Dr. Richard M. Highsmith, Jr., has assumed responsibility for the Departmental project to revise the Atlas of the Pacific Northwest; Resources and Development. The Atlas published by Oregon State College has enjoyed a good sale since its first issue in 1953. The revised edition will be somewhat enlarged and improved throughout. It is expected to be available for distribution in the late spring or early summer of 1956.

World Regional Geography written by Dr. Oliver H. Heintzelman and Dr. Richard M. Highsmith came off the press of Prentice-Hall Co. in the late spring.

THE PENNSYLVANIA STATE UNIVERSITY

Since our last news item from Penn State in *The Professional Geographer* in 1953 there have been a number of administrative and address changes. Our address is now the Department of Geography, The Pennsylvania State University, University Park, Pennsylvania.

The 1955–56 staff in Geography has 14 members––6 full-time, 6 teaching graduate assistants and 2 research graduate assistants. The Department has over 50 majors and minors from the College of Mineral Industries and College of Education, over 800 students taking service courses in geography, and 15 graduate students. In the last two years, Ph.D's in geography have been granted to Roger Heppell and Charles M. Chesnutwood.

Members of the Department have been particularly active in research during the past year. Allan Rodgers' study of "Changing Locational Patterns in the Soviet Pulp and Paper Industry" was published in *The Annals* and E. Willard Miller's article, "Some Aspects of Population Trends in Pennsylvania" in the *Journal of Geography*. Other articles accepted by *Economic Geography* for publication include Frederick Wernstedt's "Cebu, Focus of Inter-Island Trade," Rodgers' "Industrial Diversification in the United States," and Miller's "The Southern Anthracite Region, A Problem Mineral Area."

Department members have also been active in the past year in presenting papers at professional meetings. Rodgers and Miller presented papers at the A.A.G. annual meeting in Memphis, Wernstedt gave a paper on "Geographic Regions of Mindanao" at the Mindanao Conference at the University of Chicago in May, and Miller addressed a meeting of the Pennsylvania economists at University Park on "Economic Problems in the Southern Anthracite Region."

During the past year a number of the Department members have received research grants. Rodgers received one from the Council on Research of the

Pennsylvania State University to study localization trends of United States manufacturing, and Wernstedt received one from the Office of Naval Research to continue his study of inter-island shipping in the Philippines, where he spent the summers of 1954 and 1955. The College of Mineral Industries of The Pennsylvania State University supported a study of the problems of declining mineral regions in Pennsylvania under Miller's direction. Rodgers has a leave of absence for the academic year 1955–56 for a study of the port of Genoa, Italy, supported by the Office of Naval Research. While Dr. Rodgers is on leave David Kornhauser, a far eastern expert who lived and worked in Japan for a number of years, is a visiting professor in the Department.

Three members of the Department––George F. Deasy, Phyllis R. Griess, and E. Willard Miller along with Earl C. Case from Cincinnati––are completing work on "The World's Nations: An Economic and Regional Geography," to be published by the J. B. Lippincott Company. The book, organized on a country basis with a regional approach within the countries, is designed as a basic text in the fields of economic and regional geography.

UNIVERSITY OF OMAHA

In September 1955, a Department of Geography was established at the University of Omaha under the chairmanship of Richard S. Thoman. Initially it is to be a one-man Department. The tentative curriculum, offering credit to undergraduate students in both the Social Sciences and Natural Sciences Divisions of the College of Arts and Sciences as well as those in the Colleges of Education, Adult Education, Business, and Applied Arts and Sciences, includes the following courses: World Regions (an introductory survey); Natural Resources of the United States and their Conservation; and Economic Geography (a world-wide appraisal). The program is designed not only for the undergraduate student, but also for older enrollees in the University's adult education program.

Associate Professor Thoman came to the University of Omaha from the University of Chicago, where as Research Associate on that faculty he has just completed a study of the free ports of northern Europe and the significance of their experience to the immature foreign-trade zone (free port) movement of the United States. This 18–month field-library study was carried out under the sponsorship of the Office of Naval Research.

THE NATURE OF GEOGRAPHY

Richard Hartshorne

Copies of the 4th edition may be obtained from the Central Office of the AAG, The Library of Congress, Washington 25, D.C. The price is $2.00 plus 20¢ for handling in the United States, and 25¢ for handling in other countries.

In order to aid students, as in the past, this volume is published by the Association and sold at cost, with no royalties to the author.

PERSONAL NEWS

ROGER H. CHARLIER has been appointed Special Lecturer in Geology and Physical Geography at Hofstra College, on Long Island. During the past summer he continued his studies of Belgian coast erosion and spent some time at the University of Paris.

JOHN W. ABRAHAMSON has entered the investment securities business in Washington, D. C., after ten years service in the Bureau of Reclamation as Chief of its Economic Resources Branch in Billings, Montana, and as Resource Economist in the Washington office.

WILLIAM L. MAYO, Michigan, M.A. 1954, has been appointed to an instructorship at the University of Buffalo.

ROBERT E. HUKE, Dartmouth College, is on leave until September 1956 teaching economic geography and helping to set up a new Asian Studies Program at the University of the Philippines. His mail address there will be: c/o U.S.E.F., United States Embassy, Manila.

MALCOLM J. PROUDFOOT, Northwestern University, represented the Association at the meetings of the British Association for the Advancement of Science held in Bristol, England, from August 31 to September 7, and the Deutschen Geographentag in Hamburg on July 21 to August 6. Dr. Proudfoot has recently received from King Paul of Greece the Cross of Commander of the Royal Order of Phoenix in recognition of his part in postwar repatriation of some 30,000 Greeks. Several other countries have accorded similar recognition.

KIRK H. STONE is on research leave under a Fulbright award until September 1956 for the study of Scandinavian frontier settlement. The office address is: Geografiskes Institutt, Oslo Universitets, Blindern, Norway. Prof. Stone taught at McGill Summer School in August and then did two weeks field work on settlement in Iceland on the way to Oslo, accompanied by his family.

MEREDITH F. BURRILL has been awarded, by the Spanish Government, the Cross of the Order of Alfonso X, El Sabio, with the rank of Encomienda con Placa, in recognition of his part in topomymic work in the United States.

RAFAEL PICÓ, who over the past several years has compiled an outstanding record as Chairman of the Puerto Rico Planning Board is now Puerto Rico's Secretary of the Treasury. The new Chairman of the Planning Board is Candido Oliveras.

LLOYD MITCHELL is now Senior Meteorologist, Operations Division, Meteorology Department, Army Electric Proving Ground, in charge of meteorological stations scattered from Alaska to the Canal Zone and from coast to coast. His new address is P.O. Box 21, San Jose Station, Bisbee, Arizona.

EARL PARKER HANSON, on leave from the University of Delaware, is in Puerto Rico as government consultant on economic development. His recent book on Puerto Rico is being distributed by the U. S. Information Service to prominent persons in all the underdeveloped non-communist countries, as "America's Answer to Communism and Colonialism." Letters from recipients such as the Prime Minister of the Gold Coast, the President of Haiti, and Nobel prize winner Lord John Boyd-Orr attest its effectiveness.

ROGER E. ERVIN (Ph.D. Florida) is substituting for Earl Hanson at Delaware.

GEORGE T. RENNER, Teachers College, Columbia University, died of a heart attack on October 14 at the age of 55. Born in Winfield, Kansas, he received his B.A. degree from Cornell College in Iowa, the M.A. and Ph.D. degrees from Columbia, and an honorary LL.D. from Cornell College. He taught geography at Columbia, the University of Washington, and George Washington University before joining the faculty of Teachers College in 1936, and later, during summers or for short periods, at Minnesota, Stanford, Fresno State College, San Jose State College, and the University of Southern California. He worked in various capacities for the Iowa Forest Service, the National Resources Board, the National Resources Committee, the National Resources Planning Board, the Air Force and the Civil Aeronatucs Administration. He was geographic editor for T. V. Crowell, publishers, since 1944.

He published extensively, his articles in popular journals receiving wide public attention. His broad interests were reflected in membership in several scientific and professional societies as well as the Association of American Geographers.

SIDMAN PARMELEE POOLE died suddenly of a heart attack at the age of 62 on October 28. Dr. Poole was born at Syracuse, New York on October 19, 1893. He graduated from Syracuse University and served on its faculty from 1921 to 1940. As Chief of the Topographic Branch of the Division of Intelligence, U. S. Army, 1940–46, the effective use of geography in military intelligence won him the Legion of Merit and the Order of the British Empire.

In 1946 he became Chairman of the University of Virginia's new school of geography, and, in 1947, Director of a new Virginia Institute. He was also editor of the Bobbs-Merrill Co. geographic texts and readers. He was a member of the Association of American Geographers, the National Council of Geography Teachers, the American Geographical Society, and the Royal Geographic Society, the organizer and first President of the Virginia Geographical Society, and a member of the Explorers Club, Cosmos Club, Rotary International and United Nations Club.

COY T. PHILLIPS (Ph.D., 1945, University of North Carolina) drowned on August 24, 1955 at The Isle of Pines in South Carolina. He had taught at the Woman's College of the University of North Carolina since 1944. He had published several papers in professional journals and was active in the affairs of the University, the Southeastern Division of the A.A.G., and of the Presbyterian Church.

REVIEWS

Taschenatlas der ganzen Welt and *Die Weltmeere.* V E B Geogr.–Kartogr. Anstalt. Gotha. 1954. 4 x 6 inches.

These two pocket atlases contain an enormous amount of information, although one needs good eyesight to read the small print. The first is a conventional atlas in the best "Stieler" tradition. The VEB is the direct descendant of Justus Perthes in Gotha under the able leadership of Hans-Richard Fischer. It contains 123 pages of geographic-statistical information, 26 double-page colored maps, with enough names on them to fill a 70-page index.

The "Weltmeere" is perhaps the more original and interesting of the two. It contains 128 pages of text on meteorology, climatology, hydrography, navigation, nautical instruments, signals, types of ships, Loran, Decca, radar, lights, flags, etc. Eleven color plates illustrate this part. Twenty-three colored charts display magnetism, winds, currents, tides, depths. Each ocean has a chart about as rich in information as our *Monthly Pilot Charts.*

Both volumes are up to date and the cartography is excellent. One may wonder, however, why they chose this very small format. Gotha is in the Russian zone, which may explain in part the economy in materials. While the land atlas is convenient to carry along as reference the "Weltmeere" will also fill a gap in our map libraries.

--- Erwin Raisz

Oxford Travel Atlas of Britian. D. P. Bickmore, General Editor. Oxford University Press, 1953. 34 and cclii. pp. 7 1/4 x 4 7/8 inches. $2.00

The *Oxford Travel Atlas of Britian,* third in the series of Oxford atlases, contains seventeen double-page layer-colored maps of Great Britian and Northern Ireland on the scale of thirteen miles to the inch, a scale more generous than that of most American road maps and atlases, and with more attention to relief. Great Britian and Northern Ireland are approximately equal to New York–Pennsylvania, or Illinois–Indiana. Thirty pages of specialty maps deal with population distribution; major highways; railway lines; sports; Greater London; physical features; scenery; and sun and rain. The last three are revisions of similar maps in the *Concise Oxford Atlas.* The six pages of maps of major highways include traffic density points and symbols indicating the number of vehicles per minute, from less than two to more than fifteen, with symbols for intermediate densities at two to four, four to ten, and ten to fifteen, as of August 1950.

The national grid squares of approximately six and one-fourth miles per side, or an area of thirty-nine square miles, are superimposed on the detailed sectional maps, and their approximate equivalence to the American congressional township makes the grid squares useful for areal comparisons to an American who consults this atlas.

Other features are county lists of country houses and notable gardens, and of one hundred good and unusual country eating places in towns of less than 5,000. The 253-page gazetteer contains plans of larger cities, climatic data, and tourist information. The volume is printed in subdued but pleasing colors and with place-names more legible than in other Oxford atlases. At two dollars this atlas is a bargain.

--- Charles F. Strong

Agricultural Atlas of Missouri. James E. Collier, Bulletin 645, Feb. 1955. Agricultural Experiment Station, College of Agriculture, University of Missouri, Columbia, Missouri. For sale by Agricultural Experiment Station. $1.00

Eight divisions of the *Agricultural Atlas of Missouri* contain maps illustrating: (1) Missouri — The State and Its People, (2) Forests, Soil and Climate, (3) The Use of the Land, (4) Types, Size and Number of Farms, (5) Distribution of Crops, (6) Distribution of Livestock, (7) Agricultural Values, and (8) Selected Agricultural Industries. Some 88 maps and limited amounts of textual material are used to tell the story of the agricultural resources of the state.

The larger proportion of the maps are on the scale of 1:3,500,000, with a minority on the scale of 1:4,500,000.

The format and map design used by the author are superior. The maps are generally clear, legible, and well-balanced. The symbolization varies from extremely good to somewhat less than desirable. In a few instances such as the maps appearing on pages 21, 29, and 31 the area shadings do not have enough contrast. These deficiencies are probably due to the author's inexperience in selecting the proper hues of the primary colors for three color reproduction, an experience shared by most geo-cartographers.

Balanced against the few maps which could stand improvement are the many maps which demonstrate excellent use of color. The maps on pages 4, 5, 6, 18, 24, 26, and 27 particularly stand out in this respect. Several of the dot maps also deserve mention. Excellent results are obtained by filling in the state with a pale yellow area shading and then overprinting with blue dots. (See pages 30–34). This technique gives an added unity to the body of the map which makes these dot maps stand out as some of the best ever produced by an American cartographer.

Professor Collier is to be commended not only for a fine piece of cartography, but also because his foresight and sales ability have enabled him to demonstrate the utility of geographic cartography to a wider public. Many geographers interested in promoting the development of state atlases, will find the door of opportunity widened because of this excellent atlas.

— George S. Jenks

Rand McNally Cosmopolitan World Atlas. Rand McNally. Chicago. 1955. 400 pp. 11 x 14 inches. $13.95.

The Rand McNally Company has just released the Centennial Edition of its Cosmopolitan World Atlas. This is the third edition of the Cosmopolitan Atlas, first issued in 1949, enlarged in 1951, and now greatly improved in commemoration of Rand McNally's Centennial Celebration in 1956.

The Company can take justifiable pride in the 400 pages of maps, pictures, text, and index. The 155 pages of colored maps are easy to read, well executed, and most of them are enhanced by a background of relief in hachures. Among the many new features some of the more conspicuous are 16 pages of colored relief maps of the continents, the U. S., and Canada; 12 pages of text and photos on points of scenic interest in the U. S.; a table showing 1950–55 comparative populations in U. S. metropolitan areas, and some 10,000 changes in population tables.

From the viewpoint of many geographers the index could be improved by the use of grid coordinates in addition to, or instead of the letter–number system. Also, the index includes more place names than are shown on the maps. It would be helpful if these were identified in some way. Nevertheless, the atlas is an extremely desirable reference work of unusually high quality at a moderate cost for both library and home use.

— Arch C. Gerlach

The Atlas of Australian Resources. Department of National Development, Canberra. A.C.T.

This work is one of the outstanding monuments of postwar cartography. The term "atlas" is used here in a wider sense because the work will consist of about 50 large (30' by 28") individual sheets. Of these to date ten are already published. These sheets show climate, soil, underground water, density of population, minerals, agriculture, and major projects. Most sheets contain a single map of Australia, on a scale of 1:6,000,000, with explanatory notes in the corner. The map is on a polyconic projection. It would have been quite possible, by omitting margins and insetting Tasmania, to reduce the height of the map so that it could have been bound into a two-page atlas, but the Department counts mostly on individual use of the sheets.

The work was directed by the noted German cartographer, Konrad Frenzel, and the cartography is excellent. The choice of colors, patterns, superimposed diagrams and symbols is done with mature judgement. The engraving is superb, done by the Mentmore Company in Sydney. Each map is supplemented with a pamphlet written by specialists.

The "Rainfall" and the "Temperature" sheets consist of one annual map surrounded by twelve monthly and three special maps, all of remarkable detail. This is justified by the great dependence of Australian prosperity on climate. The "Mineral" map shows a surprising number of little symbols--one for each mineral graded in three sizes according to the importance of the deposit. The difference between the larger and smaller symbols, however, is not large enough to give a realistic picture of actual production. Here the use of colored and labeled block-pillars proportionate to production would have been justified even if production would vary so rapidly that this would be soon out of date. The "Density of Population" map shows cities by shaded gray transparent spheres, a very successful treatment. We are looking forward to the forthcoming sheets of this excellent work.

--- Erwin Raisz

Imago Mundi: A Review of Early Cartography. Edited by Leo Bagrow. Stockholm. Vol. II. E. J. Brill, Leiden, 1954. 11 3/4 x 8 3/4 inches. 184 pp. $12.50. Available in the United States from Henry Stevens, Son & Stiles, 16 East 46th Street, New York 17, N. Y.

Scholars generally and historical cartographers especially will welcome this recent issue of *Imago Mundi,* not only because some time has elapsed since the preceding volume was published, but particularly because this issue is packed with a wealth of information about a wide variety of subjects. The editor, Leo Bagrow of Stockholm, the corresponding editors, and the authors can take considerable pride in this valuable contribution to our knowledge of early cartography. The effort required in obtaining such a wide variety of studies, the editorial work required in assembling and preparing the final copy, and especially the unusually excellent reproduction of many maps and illustrations, some of which are large and multifolded, should bring forth words of praise from each reader. Special recognition should be given to the "Konung Gustaf VI Adolfs 70--arsfond för Svensk Kultur" which subsidized the publication of this issue. To this benefactor must go a good deal of the credit for making possible the high quality of publication.

This issue of *Imago Mundi* includes five different kinds of presentation: a. principal articles, of which there are fifteen; b. shorter articles, materials and notices, of which there are thirteen; c. a chronicle; d. reviews, of which there are nine; and e. a bibliography of some 135 recent publications in the field. The entire publication is in English.

The fifteen principal articles on a variety of subjects include five of special value to those interested in the historical cartography of the Americas; (1) *New Light on Vespucci's Third Voyage,* by R. Levillier; (2) *Nautical Charts Attributed to Verrazano (1525–1528),* by M. Destombes; (3) *Some Early Maps Relating to Florida,* by D. O. True; (4) *An Unknown Camplain Map of 1616,* by L. C. Wroth; and (5) *The New England Coasting Pilot of Cyprian Southack,* by Clara E. LeGear. Since each of the articles generally deals with the identification and description of one or several little-known maps, the author in his critique or appraisal does a commendable job of identifying his sources in footnotes or in a form that is made part of the text. The footnotes are a significant source of bibliographic-type information and are worth the reader's careful examination because of the wide variety of basic sources that are listed and because they are so complete and understandable.

An outstanding feature of this issue is the remarkable reproduction of the unique and little-known major maps so useful to the historian in the subject field. In addition to the several scores of black and white line-cut reproductions there at least thirty photoreproductions of page-size and larger. Notable among these are the multifold reproductions of "M. Waldseemüller's Carta Itineraria Europae (1511) 1520 (Museum Ferdinandeum, Innsbruck)" op. p. 150, and an "Old Russian World Map (Coll. J. Lelewel, University Library, Wilna)" op. p. 169, which has an overlay transparency on which numbers over the Russian description on the map are keyed to the corresponding translations in the text.

The reproductions alone are more than worth the cost of this issue of *Imago Mundi.* Its value as a contribution to early cartography, especially of the Americas, commends it to all libraries and students interested in Americana and in historical cartography.

--- Herman R. Friis

The Columbus Atlas. John Bartholomew, editor. John Bartholomew & Son. Edinburgh. 1954. viii and 297 pp. 8 x 11 inches. $10.00.

This excellent atlas concentrates on physical maps of the continents by sections. There is a political map introducing each series of sectional maps, a map showing UN member countries, a "strategic map" of North America showing relation to adjoining continents, a world physical map, and world maps of structional regions, drainage regions, climatic types, great soil groups, natural vegetation, land utilization, communications, January and July rainfall, temperature and winds, and airways, and a double page spread of United States and Canadian cities. The sectional maps, however, comprise most of the 160 pages of maps.

The sectional maps are 1:5,000,000 for Anglo-American, 1:10,000,000 for Latin America, Asia and Africa, and 1:2,000,000 for Europe, with a few small but important regions on larger scales. The relief tints are particularly effective and attractive. Map arrangement on the pages uses space efficiently and reflects attention to natural region continuity.

With numerous place names, especially on some sheets, map readability is preserved by use of small size type at some sacrifice to name legibility. A different small size type face might have given better results. The names appear to have a high order of accuracy, though occasionally the spellings differ between map and index, and, as in the case of the 1:5,000,000 Lower Yangtze map and the 1:10,000,000 China and Indo-China map, between different maps of the same area. The 50,000 name index includes all but a scattered few of the names of the maps.

Altogether the atlas is beautifully executed and well designed for use by those who do not want the wide variety of distribution maps and collateral information often included in atlases in this price range.

Meredith F. Burrill

NEW PUBLICATIONS

The Language of Social Research: A Reader in the Methodology of Social Research. Paul F. Lazarsfeld and Morris Rosemberg, editors. Glencoe: The Free Press, 1955. 590 pp. $6.75.

Of particular interest to those concerned with the further methodological development of our discipline are the materials contained in the first and last sections of this work. Barton's statement on property spaces in the former and Zetterber's on axiomatic theories in the latter are both fine examples by which geographers might well profit. Sometimes it has been stated that those geographers interested in the methodological development of their discipline have failed to take account of methodological advances in closely related fields. A close perusal on their part of *The Language of Social Research* should at least partially correct this major deficiency.

This methodological reader is intended to focus on four main points: (A) the reformulation of research problems, (B) presuppositions underlying the use of specific methods, (C) interconnections between methods, and (D) the formalization of propositions. The body of this work is divided into six major divisions to carry out this plan. (1) Concepts and Indices, (2) Multivariate Analysis, (3) The Analysis of Change Through Time, (4) Formal Aspects of Research on Human Groups, (5) The Empirical Analysis of Action, and (6) Toward a Philosophy of the Social Sciences. Each of these major divisions, as well as the book as a whole, is prefaced by a summary statement written by the authors. These summary statements are some of the finest of their kind available today and, if grouped together, could well form a small book in their own right. The editors have extensively sampled the literature of the social sciences to provide forceful examples of modern social research in action. The well annotated reading lists following each major division will facilitate further study of the methodology of social research.

What About Maps? Walter W. Ristow. In *Library Trends,* October 1955. pp. 123–139. Limited quantity of reprints available from the author, Map Division, Library of Congress, Washington 25, D. C.

In this article, developments and accomplishments of the past several years in map librarianship are critically reviewed and summarized, with special attention to current practices in the fields of map acquisition, processing and servicing for reference use. An additional feature of the article is its inclusion of a bibliography of seventy publications in the field of map librarianship.

Report of the South Pacific Commission for the Year 1953. South Pacific Commission. Noumea. 1954. 33 pp.

This is the sixth annual report of the Commissioners to the participating Governments of Australia, France, Netherlands, New Zealand, United Kingdom, and United States that are responsible for the administration of nearly all the Islands of the South Pacific. It contains: (1) a summary of the Second South Pacific Conference, April 15–27, 1953, attended by delegations from seventeen territories within the Commission area and the Kingdom of Tonga, and by many observers; (2) an outline of the fields of concentration of effort in the work program, the reasons for the concentration, and the nature of the work done; (3) a financial statement; and (4) a list of publications by, or on behalf of, the Commission. Food production and health were especially stressed but the "concentration" appears to have covered a fairly wide range of projects.

Permafrost and Ground Water in Alaska. David M. Hopkins, Thor N. V. Karlstrom, and others. Geological Survey Professional Paper 264–F. iii and 34 pp. 15 plates of photographs. 2 maps and 5 cross sections in text. For sale by Supt. of Documents, Washington 25, D. C. $1.00.

This paper summarizes present knowledge of permafrost and ground water, and their effects on each other, in representative areas of Alaska. It also comments on the usefulness and limitations of photo-interpretation in permafrost study, stating that its strictly supplementary role has been mistunderstood by several nongeological authors. That much remains imperfectly understood is emphasized by the fact that the members of the Geological Survey whose experience is brought together in this paper are not in complete agreement on some of the generalizations for which the senior authors take the responsibility.

Finland and Its Geography: An American Geographical Society Handbook. Raye R. Platt, Editor. Printed for AGS by Duell, Sloan, and Pearce, New York, and Little Brown and Company, Boston. xxv and 510 pp., 117 maps and diagrams, 122 photographic illustrations. $9.00, 25 percent discount to fellows of the A.G.S.

This is the first of four handbooks being produced by the American Geographical Society under a contract with the Office of Naval Research for a series of "Pilot Studies in Geographical Compendia." Similar volumes on Egypt, India, and Pakistan will follow.

These handbooks are designed to provide comprehensive digests of background material and up-to-date information on selected countries of special interest in the field of international relations at present. They are to be, however, to quote from the introduction to the Finland volume, "neither scientific treatises intended only for the professional geographer nor mere compendia of facts, but basic information presented with a view to creating and sustaining reader interest."

The Finland volume is based chiefly on Finnish sources and is presented in 16 chapters: History, Government, Population and Social Structure, Agriculture, Manufacturing Industry, Forest Industry, Minerals and the Mining Industry, Fishing Industry, Finnish Cooperative Movement, Transportation and Communications, Commerce, Natural Vegetation, Geographical Regions, Climate, and Cartography. Chapters on Geology and Surface Configuration (a detailed presentation illustrated with numerous maps) and Nomenclature of Communes and Towns (with location maps) are presented in the Appendix.

Treasure Maps in the Library of Congress. J. Douglas Hill and Richard S. Ladd. Map Division. 1955. 23 pp., processed. For sale by the Card Division, Library of Congress, Washington 25, D. C. 25 cents.

This is a bibliography of 42 maps and 23 books that show or describe the location of sunken or buried treasure. Many of the items also provide considerable information on the nature and amounts of treasure cargoes and the dates when they were lost. Maps that are colorful and interesting enough to use for decoration are identified in the index.

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Introduction to Asia: A Selective Guide to Background Reading. L. King Quan. Reference Department, Library of Congress. 1955. x and 214 pp. For sale by Supt. of Documents, Government Printing Office, Washington 25, D. C. $1.00.

This annotated blibligraphy by a former consultant on Asian affairs in the Reference Department is intended for the general public, rather than the specialist for whom more extensive bibliographies are available, and therefore "... preference is given to informative and easily understandable sources ... ." Compilation was completed in 1953 but thirty subsequent publications are listed in an included supplement. Several works by members of the Association of American Geographers are cited. The sources listed are mainly those in English. A few in other western languages are included.

Sundsvalls Distriktet 1850–1950. Filip Hjulström, Gunnar Arpi, and Esse Lövgren. Geographica. Papers from the Geographical Institute, Uppsala University, No. 26. Uppsala, 1955. v and 418 pp. 112 figs., 4 folded maps in pocket.

This is a geographic analysis, in Swedish, of the evolution of the Sundsvall district about sixty-five miles north of Stockholm, notable as the world's most concentrated, and probably the largest, wood-industry region, though there are other industries there, too. Hjulström wrote the sections on the physical setting and the district's settlements and economic life in the mid-1800's. Arpi contributed detailed studies of forests, rafting, forest management, the iron industry, sawmills, large-scale manufacturing and wood-conversion industries, and an analysis of industrial employment from 1896 to 1950. Lövgren's demographic study of the district rounds out the book. The three authors present an interesting picture of sequences in the structure and distribution of industry consequent upon changing economic conditions in an especially favored geographic area.

Hong Kong, Macao, Sinkiang, Taiwan and Tibet. Gazetteer No. 5. Board on Geographic Names. August 1955. For sale by Supt. of Documents, Government Printing Office, Washington 25, D. C. iv and 390 pp. $2.00.

This gazetteer of official standard names approved by the Board on Geographic Names contains about 27,000 entries, including 1,225 for Hong Kong, 70 for Macao, 5,900 for Sinkiang, 17,800 for Taiwan, and 2,300 for Tibet in separate lists.

Use of double column format has kept the size down to less than 400 pages, despite the large number of cross-referenced variant names. Areas where the names must be transcribed from a non-alphabetic writing system characteristically have many variant names, since a difference in transcription of a single symbol will result in different rendition of all words containing it.

The names in Taiwan, rendered from Chinese by the same system used for the mainland names, replace the Japanese names or forms approved during World War II as a war-time expedient.

Gazetteer of Canada: Manitoba. Canadian Board on Geographical Names. Ottawa. 1955. vi and 60 pp. For sale by the Queen's Printer, Ottawa, Ontario. $1.00.

This third gazetteer issued by the Canadian Board on Geographical Names contains approved names for all populated places and geographic features in Manitoba. Listings include approved name including generic term, designation (lake, village, etc.), and location. The last item is indicated by direction from another entity, by section, township and range in subdivided territory, and by latitude and longitude. The previous gazetteers cover southwestern Ontario (50 cents) and British Columbia ($3.00).

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